

LEARNS:

1. HashMap
 1. each cell of it has a hashcode.
 2. like dictionary in Python.
 3. vectors in Clojure is stored like HashMap
2. HashSet to get the key list and the value list.. Set is an array with unrepeated elements.
3. How to design a program though really not successful
4. How to use "continues". Not really, I still feel it tricky when tangled in a complex while+if+{{{}}} set.
5. System.nanoTime() ->
 1. public static long nanoTime()
 2. [System.nanoTime] Returns the current value of the running Java Virtual Machine's high-resolution time source, in nanoseconds.
 3. System.nanoTime() returns the elapsed running time of the JVM in nanos, whereas System.urrentTimeMilis() returns the time in milliseconds since midnight, January 1, 1970 UTC.
6. Override functions. Eg. two constructors with different args
7. use Class.classFuction() to call constructors.
8. LinkedList
 1. linear, stored in non contiguous location
 2. Arrays in Clojure are stored like LinkedLists
 3. removeBack() has to have 2 pointers, one for the current node and one for the previous one because setting the last node to null is not enough, the second last node's reference to its next node should also be set to null.
 4. Why Linked List? Inserting a new element in an array of elements is expensive, because room has to be created for the new elements and to create room existing elements have to shifted.
 5. Advantages over arrays:
 1. Dynamic size
 2. Ease of insertion/deletion
 6. Drawbacks:
 1. Random access is not allowed. We have to access elements sequentially starting from the first node. So we cannot do binary search with linked lists efficiently with its default implementation. Read about it [here](#).
 2. Extra memory space for a pointer is required with each element of the list.
 3. Not cache friendly. Since array elements are contiguous locations, there is locality of reference which is not there in case of linked lists.

(4.5.6 Reference: <https://www.geeksforgeeks.org/linked-list-set-1-introduction/>)

QUESTIONS:

1. In my code I wrote the wardrobe-room ending print statement in my user class, because I don't know which object should I use to call the function if I was going to write it in a function. What's the best way to solve this problem?
2. Even though I have already planned out how the program would look like, when I was actually writing it, I kept revising and adding new things, which forced me to intensively revise functions and parameters. Since every function has a chain of functions calling them(and each other), revising one function causes long time revision. Is there a better way to solve this problem? It is because my logic is not clear->I should tangle functions so much..?
3. In the GameWorld Interface, there is a function called getPlace. Where is the function body of this function?

